

AMENDMENTS TO THE DRAWINGS:

Replace the drawings in the case with the accompanying
new drawings.

REMARKS

The question as to the direction of rotation about the third axis is answered herewith: it is as shown in amended Figures 5 and 6 and is the first supposition set forth in the Official Action. Indeed, this is the only way that the cutting head 3 could rotate about a vertical axis such as axis 3: rotation about an axis implies that the axis stands still and that the device that rotates, moves about it at a fixed distance in a circular path. This is the way the earth rotates on its axis, and indeed is the way that any device rotates about an axis.

Basic claims 19 and 33 have been amended so as to emphasize the relationship of the manipulator 12 with the cutting head 3: it is mounted on and movable with the cutting head. See, for example, Figure 8.

This relationship is now more clearly expressed in basic claims 19 and 33.

New claim 44, on the other hand, is drawn to a feature of novelty that comprises the orientation and manner of movement of the blade 14. This is clearly illustrated in Figures 5 and 6.

Reconsideration is accordingly respectfully requested, for the rejection of the claims as unpatentable over BANDO in view of WARREN or CHRISTIAN in view of WARREN.

BANDO discloses a cutting head 72 movable by numerical control means along three directions; this cutting head is

supported by the base 52. In addition, this device is provided with suction means 63 which are supported by the base 52. In other words, the suction means are not supported by the cutting head.

Independent claims 19 and 33 now make this distinction.

Therefore, independent claims 19 and 33 claim that the cutting head carries both the cutting blade and the suction means.

This structure allows the realization of a cutting head able to cut also small pieces of sheet and to move them by the suction means, without the need (after a cut has been made) to move the suction means to place them on the piece being cut, because the suction means (which are located close to the blade) are naturally placed above the piece being cut.

Therefore, cutting and removal of pieces is easy and fast.

Neither BANDO nor WARREN disclose that the suction means may be placed on the cutting head in order to make it easier and faster the removal of the pieces being cut from the machine.

In addition, the combination of BANDO with WARREN is not within the capacity of one skilled in the art.

In fact, WARREN relates to a tree shaping apparatus.

On the contrary, BANDO refers to a machine for working a glass plate. Thus, the devices of BANDO and WARREN are not

similar at all and the skilled person to improve the device of BANDO would not have looked for useful teachings in WARREN.

In addition, WARREN discloses an apparatus having a mobile transport (column 2, line 32) so that the apparatus may move along a row of Christmas trees (column 2, line 68). Movement of the apparatus may cause vibrations or hits which are not dangerous for an apparatus for cutting Christmas trees.

BANDO refers to a device which may not move (see BANDO, Figure 1, showing the feet of the apparatus not being wheels); in addition, the apparatus of BANDO, as the apparatus of the present invention, works very delicate glass sheets which would not resist vibrations or hits.

Thus, also for these reasons, the skilled person to improve the device of BANDO would not have looked for useful teachings in WARREN which refers to a device very different and which, during working, causes vibrations and possibly hits which could cause breaking of the glass sheets.

In addition, even combining the teachings of BANDO with those of WARREN, the skilled person would have realized a device having different features from the ones claimed in the present application.

In fact, WARREN has the teaching of connecting the blades to a vertically rotating shaft.

Thus, the skilled person to improve the device of BANDO, according to the teachings of WARREN, would have provided

also in BANDO a cutting head 60 (and only the cutting head 60, but not the support 48 carrying the two cutting heads and the suckers 63) able to rotate about a vertical axis. For example (Figure 14), the skilled person would have placed a pivoting connection between each support 49 and each linear slider 68 or between the bracket 64 and the cutter 60.

The device of BANDO, even modified in this way, would not have any cutting head carrying both the suction means and the blade.

The same considerations apply to CHRISTIAN. CHRISTIAN shows a cutting head 75 carrying the blade 74 and a further head 54 carrying the suction means. These heads are connected with each other by the cylinder 70.

On the contrary, claims 19 and 33 of the present application claim that the device is provided with one single head having both the blade and the suction means for making the removal of the cut pieces easier and faster.

CHRISTIAN may not properly be combined with WARREN because WARREN refers to a tree shaping apparatus (see the title), whereas CHRISTIAN refers to a machine for sawing blocks of stone or marble or granite.

In addition, while WARREN describes an apparatus having a mobile transport (column 2, line 32), CHRISTIAN refers to a device which may not move and which works very delicate stone or marble sheets which would not resist vibrations or hits.

Finally, even combining the teachings of CHRISTIAN with those of WARREN, the skilled person would have produced a device having different features from the ones claimed in the present application.

In fact, WARREN has the teaching of connecting the blades to a vertically rotating shaft.

Thus, the skilled person, to improve the device of CHRISTIAN, according to the teachings of WARREN, would have provided also in CHRISTIAN a cutting head 75 (and only the cutting head 75, but not the support 71 carrying the cutting head 75 and the suckers 54) able to rotate about a vertical axis. For example (Figure 2), the skilled person would have placed a pivoting connection between the support 71 and the head 75. Thus, the device of CHRISTIAN modified in this way would not comprise any cutting head carrying both the suction means and the blade.

Turning now to new claim 44, we see a device that cannot be produced by any combination of references involving WARREN. In WARREN, the blades are necessarily inclined, to shape the tree. But in the present invention, the blade 14 is parallel to axis 9, and so is able to produce diagonal cuts whose cut surfaces are orthogonal to two opposite surfaces of the sheet that is being cut. In other words, this is an entirely different arrangement than in WARREN.

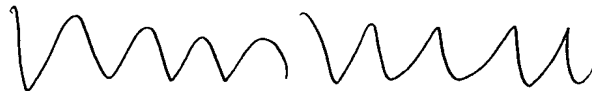
As the claims now in the case clearly bring out these distinctions with ample particularity, it is believed that they are all patentable, and reconsideration and allowance are respectfully requested.

In view of the present amendment and the foregoing Remarks, therefore, it is believed that this application has been placed in condition for allowance, and reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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RJP/lk

Appendix:

The Appendix includes the following item:

- replacement sheets for Figures 1-19